

Cont  
C1

Amendment  
U.S. Patent Application No. 09/868,953

<400> 2  
Met Phe Ser Thr Lys Ala Leu Leu Leu Ala Gly Leu Ile Ser Thr  
1 5 10 15  
Ala Leu Ala Gly Pro Trp Ala Asn Ile Cys Ala Gly Lys Ser Ser  
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Asn Glu Ile Arg Thr Cys Asp Arg His Gly Cys Gly Gln Tyr Ser  
35 40 45  
Ala Gln Arg Ser Gln Arg Pro His Gln Gly Val Asp Ile Leu Cys  
50 55 60  
Ser Ala Gly Ser Thr Val Tyr Ala Pro Phe Thr Gly Met Ile Val  
65 70 75  
Gly Gln Glu Lys Pro Tyr Gln Asn Lys Asn Ala Ile Asn Asn Gly  
80 85 90  
Val Arg Ile Ser Gly Arg Gly Phe Cys Val Lys Met Phe Tyr Ile  
95 100 105  
Lys Pro Ile Lys Tyr Lys Gly Pro Ile Lys Lys Gly Glu Lys Leu  
110 115 120  
Gly Thr Leu Leu Pro Leu Gln Lys Val Tyr Pro Gly Ile Gln Ser  
125 130 135  
His Val His Ile Glu Asn Cys Asp Ser Ser Asp Pro Thr Ala Tyr  
140 145 150  
Leu  
151

**IN THE CLAIMS**

Please amend claims 1-10 as follows: (A version of the amended claims with markings to show the changes made is also attached.)

C2

1. (Twice Amended) A bone resorption inhibitor composition comprising leukocyte activating protein factor or leukocyte activating protein factor-derived substances having an amino acid sequence of SEQ ID NO. 2, in an amount effective for bone resorption inhibitory activity.

C3

2. (Twice Amended) The bone resorption inhibitor composition according to claim 1, wherein the leukocyte activating protein factor has sequences of amino acid number 19 to 151 of SEQ ID NO. 2.

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3. (Twice Amended) The bone resorption inhibitor composition according to claim 1, wherein the leukocyte activating protein factor or leukocyte activating protein factor-derived substances inhibits against osteoclast cell activity.

Out  
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4. (Twice Amended) The bone resorption inhibitor composition according to claim 1, wherein said substances have an inhibitory activity of more than 80% at a concentration of 10  $\mu\text{g/ml}$  using percent inhibition of pit formation.

5. (Twice Amended) A screening method for bone resorption inhibitor derived substances containing leukocyte activating protein factor or leukocyte activating protein factor-derived substances having an amino acid sequence of SEQ ID NO. 1, which are purified from the source of these substances, or which are prepared by or synthesized based on the information of these substances, comprising providing said derived substances and determining bone resorption inhibitory activity of the derived substances using percent inhibition of pit formation.

6. (Twice Amended) A method of producing bone resorption inhibitor comprising using leukocyte activating protein factor or leukocyte activating protein factor-derived substances having an amino acid sequence of SEQ ID NO. 1 in the production of bone resorption inhibitors.

7. (Twice Amended) A method for bone resorption inhibiting in an animal comprising administering to said animal an effective amount of bone resorption inhibitor derived substances containing leukocyte activating protein factor or leukocyte activating protein factor-derived substances having an amino acid sequence of SEQ ID No. 1.

C5

8. (Amended) The bone resorption inhibitor composition according to claim 2, wherein the

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leukocyte activating protein factor or leukocyte activating protein factor-derived substances inhibits against osteoclast cell activity.

9. (Amended) The bone resorption inhibitor composition according to claim 2, wherein said substances have an inhibitory activity of more than 80% at a concentration of 10  $\mu\text{g/ml}$  using percent inhibition of pit formation.

10. (Amended) The bone resorption inhibitor composition according to claim 3, wherein said substances have an inhibitory activity of more than 80% at a concentration of 10  $\mu\text{g/ml}$  using percent inhibition of pit formation.

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Please add the following new Claims 11-15.

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C6 --11. The method of claim 5, wherein the sample is obtained from an animal.

12. The method of claim 11, wherein the animal is a human.

13. The method of claim 7, wherein the animal is a human.

14. A method of producing bone resorption inhibitor comprising:  
providing leukocyte activating protein factor or leukocyte activating protein factor-derived substances; and

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Cb using the leukocyte activating protein factor or the leukocyte activating protein factor-derived substances in the production of bone resorption inhibitors,

wherein the leukocyte activating protein factor or leukocyte activating protein factor-derived substance has an amino acid sequence of SEQ ID NO. 1.

15. A method for bone resorption inhibiting in an animal comprising:

providing a bone resorption inhibitor derived substance containing at least one leukocyte activating protein factor or leukocyte activating protein factor-derived substance; and

administering to said animal an effective amount of a bone resorption inhibitor derived substance containing leukocyte activating protein factor or leukocyte activating protein factor-derived substances,

wherein the bone resorption inhibitor derived substances containing leukocyte activating protein factor or leukocyte activating protein factor-derived substances has an amino acid sequence of SEQ ID NO. 1.--

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